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PLANT PEST INFORMATION UPDATES
October 1985

U.S. Department of Agriculture (USDA)
Animal and Plant Health Inspection Service (APHIS)
Plant Protection and Quarantine (PPQ)

NEW PEST ADVISORY GROUP (NPAG)
PLANT PEST ACTIVITY FROM JULY THROUGH SEPTEMBER 1985

NEW PLANT PESTS

APPLE ERMINE MOTH NEW TO THE UNITED STATES

A widespread and destructive pest of apple, apple ermine moth was detected for the first time in the United States in Whatcom County, Washington, on June 20, 1985. Larvae and adults of apple ermine moth were collected from an apple orchard in a residential area of Bellingham by E. LaGasa (Washington Department of Agriculture). H. A. McKinney (PPQ) identified them as Yponomeuta malinellus Zeller, Lepidoptera: Yponomeutidae, on July 19, 1985, and R. Hodges (Systematic Entomology Laboratory, Insect Identification and Beneficial Insects Institute, Agricultural Research Service (SEL, IIBIII, ARS)) confirmed it on August 2. Empty pupal cases were also detected in early September in northern Bellingham, a new site. By September 25, State and Federal surveys were negative in six nurseries in Whatcom, Skagit, and Snohomish Counties.

Apple ermine moth occurs throughout the temperate zones of the Palearctic region and in Canada near Duncan, Vancouver Island, and in the Fraser River Valley. Larvae (a dirty yellowish gray with black spots and a black head) feed on the leaves of Malus species. Larvae soon cluster and form larger and larger tents to cover more leaves, mostly in the tree crowns. Tents can envelop a tree, resulting in total defoliation and larval feeding on tender twigs.

Notified of the new pest on August 2, 1985, an NPAG ad hoc committee evaluated it on August 14. The committee submitted its recommendations on actions to Deputy Administrator H. L. Ford (PPQ), whose decision is pending. Seven points were considered pertinent to the recommendations.

1. Four countries likely to impose regulatory requirements on U.S. apple exports due to this pest are Canada, China (Taiwan), Chile, and New Zealand.
2. The adult is difficult to identify, but larvae and pupae are identifiable.
- 3-4. Larvae feed only on Malus spp. Heavy defoliation reduces apple yields for several years.
5. Nursery stock is a probable dispersal pathway. Inspection of nursery stock for eggs would be difficult since the eggs are not readily visible.
6. A visual survey would be appropriate when new tents are visible in 1986.

7. Researchers with Agriculture Canada are conducting pheromone studies of apple ermine moth.

The ad hoc committee also determined that evidence is nil for significant risk of spread via movement of harvested apples and accompanying stems or leaves.

AFRICANIZED HONEY BEE IN THE UNITED STATES

Colonization by Africanized honey bee was detected for the first time in California. The colony was noticed in mid-June 1985 by a worker in an oilfield near Lost Hills, Kern County. M. Wasbauer (California Department of Food and Agriculture (CDFA)) and H. Daley (University of California at Davis) identified the species as Apis mellifera scutellata Lepeletier, Hymenoptera: Apidae, on July 23; T. Rinderer (ARS Bee Breeding and Bee Stock Research Laboratory, Baton Rouge, Louisiana) confirmed the identification on July 24. The specimens were collected from a fox burrow. The bee comb measured about 1.2 m across. A Technical Advisory Committee formed by CDFA estimated that the bees have been in this country for more than a year. They also believe this Africanized honey bee introduction will probably have no long-term effects because the high density of European subspecies of honey bee, Apis mellifera Linnaeus, in the area will dilute the Africanized gene pool.

African honey bee was brought into Brazil for research in 1956. Swarms escaped and multiplied and dispersed through South America and into Central America. Africanized forms have spread as far north as Honduras. Swarms are expected to spread naturally into Mexico in late 1985 and the United States by 1990.

Africanized honey bees are reputed to be aggressive, stinging more readily than the European types. They often swarm, absconding with the whole colony. They will rob other colonies, spreading diseases and parasites. They can interbreed with European varieties, transmitting undesirable traits. Because the different strains are not readily distinguishable, some time may lapse before someone suspects the Africanized bee is present. If Africanized traits were to dominate European traits in this country, the major effect might be reduced pollination of fruit, vegetable, seed, and fiber crops.

State, Federal, and county personnel implemented on July 24 an aerial survey of the area to locate apiaries and crops requiring pollination, a comprehensive survey of the core area, and surveys of the surrounding area. Emergency hold orders were issued to beekeepers around the detection site to prevent movement of colonies. On July 30 and 31, the CDFA technical committee made several survey and control recommendations. State and Federal quarantines and regulations became effective on August 15. The regulated area totaled 1,197 sq km. Movement of bees and other regulated articles will be prohibited until testing shows Africanized honey bee traits and two honey bee parasites, varroa mite (Varroa jacobsoni Oudemans, Parasitiformes: Varroidae) and honey bee tracheal mite (Acarapis woodi (Rennie) Acari: Tarsonemidae), absent. Feral colonies within an 80-km radius of the original site were killed and sampled. Over 725 bait hives were set out. Africanized honey bee was confirmed in a total of six properties including the original find. Five were within a 6.5-km radius of the Lost Hills site, and the sixth was southwest of Bakersfield (The beekeeper had established a colony from a feral swarm collected in the Lost Hills area.). All bees were killed in the two feral and four apiary sites.

TWO NEW SNAILS

White garden snail was collected in California on August 5, 1985. It was last eradicated from the United States in 1969 from California. Gardeners noticed the snails in this year's find in a 16-ha park in San Diego, San Diego County. Over 100 specimens were collected. The species was identified as Theba pisana (Muller), Stylommatophora: Helicidae, by A. Hardy (CDFA) and confirmed by R. Munkittrick (PPQ) on August 14. The snails were found on grass, ground cover, and eucalyptus trees in an embankment area of the park. Park employees have moved soil for some time from the original site to surrounding locations.

Delimiting surveys located other finds in the San Diego area about 19 km northeast and northwest of the original find and in Oceanside about 48-56 km north of the first detection. By September 30, about 21 sq km were known to be infested. Cooperative Federal, State, and county delimiting surveys continue.

This native of Sicily is widely distributed in the Old World, particularly the Mediterranean area. It occurs in parts of Europe, the Near East, Africa, and Australia. Damage to olive and almond trees has been severe in Europe. Its high reproductive capacity and voracious feeding on many garden plants, especially citrus, indicate a potential for serious agricultural damage.

A second helioid snail, Helicella maritima (Draparnaud), Stylommatophora: Helicidae, is new to the United States. Nine were collected on August 5, 1985, from the same habitat in the above park in San Diego. Specimens were identified by R. Munkittrick (PPQ). Delimiting surveys up to September 30 show about 6.5 sq km infested.

H. maritima is known to occur in parts of Australia, the Mediterranean, Western Europe, Turkey, and the Soviet Union. This snail occupies moderately dry and open calcareous sites, dunes, grassland, and hedgerows. It has been reported as a contaminant of small grains.

NPAG met ad hoc to evaluate both snails on August 16, 1985, and submitted their recommendations on actions to Mr. Ford on August 30. His decision is pending. The following points pertain to their evaluation.

1-5. The majority of interceptions at U.S. ports of entry for T. pisana and H. maritima is collected from baggage coming from Italy. Common entry pathways are with crating (marble, slate, and machinery), household goods, military cargo, the interior and exterior of seagoing containers, etc. These snails are also commonly intercepted in ship's stores on cole crops (Brassica spp.), indicating their potential as crop pests. Additional interceptions were in shipments of fresh/dry cut flowers, as well as various fruits and vegetables as cargo. When either snail is found at a U.S. port of entry, PPQ takes quarantine action.

6. Personnel from USDA, CDFA, and San Diego County are conducting delimiting surveys for both snails.

7. T. pisana has also been found in Santee, about 16 km northeast of the original detection site. This infestation was traced back to dirt moved from the original detection site to a construction site in Santee.

8. R. Munkittrick presented training at San Diego on field identification procedures necessary for survey and provided laboratory identification instructions for field personnel.

ORIENTAL FRUIT FLY INFESTATION IN CALIFORNIA

Two multiple-fly finds of oriental fruit fly, Dacus dorsalis Hendel, Diptera: Tephritidae, were discovered in Los Angeles County, California, in Long Beach and Glendale. Trapping was intensified in the core area around the three Long Beach sites, which are about 0.8 km apart. By September 27, a total of 55 adults (males and females), more than 200 larvae, and 1 pupa was found. Actions included fruit stripping and ground bait sprays of the affected and adjacent properties, soil drenches of larval-infested properties, and male annihilation spot treatments over a 23-sq-km area (initiated on September 13).

The Glendale find on September 18 was confirmed the next day. By September 23, two males and one mated female were recovered. Some actions included intensified trapping in the core area and male annihilation treatments (initiated on September 20).

A SAWFLY NEW TO THE UNITED STATES

A sawfly Pristiphora aquilegiae (Vollenhoven), Hymenoptera: Tenthredinidae, was found for the first time in the United States in New York. Specimens were collected on June 17, 1985, at Ithaca, Tompkins County. They were collected and determined by E. R. Hoebeke. Identification was confirmed by D. R. Smith (SEL, IIBIII, ARS) on July 9. Previous records indicate its presence in Canada (Ottawa) and Europe. Aquilegia, columbine, is the only host. The NPAG, notified on July 15, requested additional time to gather information to determine if this insect should be considered.

UPDATES ON ACTIONS AGAINST NEW PESTS

MEDITERRANEAN FRUIT FLY ERADICATED FROM FLORIDA

Mediterranean fruit fly, Ceratitis capitata (Wiedemann), Diptera: Tephritidae, was declared eradicated from Florida on August 27, 1985. The cooperative Federal and State campaign in the North Miami area, Dade County (PPIU--July 1985) took 4.5 months. Aerial protein bait sprays were followed by releases of sterile Mediterranean fruit flies for the first time in Florida in an eradication campaign. Over 271 million sterile flies were released through July 16. The only wild specimens taken were the original three flies.

MORE CITRUS CANKER SITES

Six new infestation sites for citrus canker have been detected in Florida in the past 3 months. The bacterium Xanthomonas campestris pv. citri (Hasse) Dye was confirmed for the first time in citrus groves and on a root sprout of citrus; grove infestations were traced to plants from infested nurseries.

Finds in De Soto County were new for this county. Citrus canker was previously found in Collier, Hendry, Highlands, Hillsborough, Indian River, Manatee, and Polk Counties (PPIU--July 1985).

The six new sites were confirmed for Polk County in a 24-ha nursery at Haines City on August 16 and in a 6.5-ha nursery between Avon Park and Frostproof on September 25; Highlands County in a 0.1-ha nursery at Avon Park on August 30 and in a 16-ha nursery at De Soto City on September 16; De Soto County on one reset in a 121-ha grove about 10 km southeast of Arcadia on September 13; and Manatee County on two plants in a 22-ha grove at Bradenton on September 25.

All movement of citrus plants, including calamondins, within and out of Florida has been prohibited as of September 6. Destruction of infected or exposed material, delimiting surveys, and tracing of infection sources and shipments of exposed plant material were implemented. Dooryard and nursery inspections continued throughout central and southern Florida. Reset and grove surveys continued. Surveys were initiated for plantings of Citrus hystrix. The leaves, used in oriental cooking, are a potential carrier of the bacterium.

ACTIONS FOR A FRUIT-PIERCING MOTH IN HAWAII

The NPAG evaluated the fruit-piercing moth Eudocima fullonia (Clerck), Lepidoptera: Noctuidae (PPIU--July 1985), from Hawaii and submitted its recommendations to Mr. Ford. On July 31, he directed that PPQ will

- 1-2. Request that J. Beardsley (University of Hawaii) develop information on its life cycle, bionomics, and larval hosts. Notify Hawaii Department of Agriculture of this request and request their cooperation.
3. Request information from R. Muniappan (University of Guam) on the status of this insect in Guam.
4. Request that ARS provide continued taxonomic support for this species.
5. If additional hosts of concern to PPQ are discovered, then suggestions for conducting pheromone studies will be developed.

Please telephone identifications of plant pests new to the United States to the NPAG Executive Secretary on (301) 436-7472. Information may be sent to the NPAG Executive Secretary at Biological Assessment Support Staff, National Program Planning Staff, PPQ, APHIS, USDA, Room 633, Federal Building, Hyattsville, MD 20782. Comments improving this report are appreciated. Corrections of a substantive nature will be noted.

